

# **EXHIBIT A**



# Audit Report



OIG-20-042

## MANUFACTURING AND REVENUE

Mint Controls Over Raw Materials and Coin Exchange Programs Need Improvement

August 18, 2020

Office of Inspector General  
Department of the Treasury

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## Abbreviations

Board	Board of Governors of the Federal Reserve System
FRB	Federal Reserve Bank
ISO	International Standards Organization
JAMES	Joint Audit Management Enterprise System
Jarden	Jarden Zinc Products, LLC
Mint	United States Mint
NCR	Non-Conformance Report
Olin Brass	Olin Brass, Inc.
NFR	Notification of Findings and Recommendations

OIG	Office of Inspector General
PEF	Public Enterprise Fund
PMX	PMX Industries, Inc.
PWC	PricewaterhouseCoopers LLP
QMS	Quality Management System
Treasury	Department of the Treasury
SOP	standard operating procedure

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## Audit Report

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August 18, 2020

David J. Ryder  
Director  
United States Mint

This report presents the results of our audit of the United States Mint's (Mint) controls over the quality assurance of raw materials used in the production of U.S. circulating coinage, which are the coins used for everyday transactions in trade and commerce and include the penny, nickel, dime and quarter.

Our review included the quality assurance of raw materials that the Mint acquires from all its circulating coinage material suppliers, as well as the coins returned to the Mint from the public and the Board of Governors of the Federal Reserve System (Board) that are recycled back into circulating coinage raw materials.

The objective of our audit was to determine the adequacy of the Mint's controls over the quality assurance of raw materials, including controls over the composition of coins returned through the Mint's coin exchange programs and used in the production of circulating coinage.<sup>1</sup> This included the review of the quality assurance procedures for raw materials prior to the minting of circulating coinage. We did not evaluate the Mint's quality assurance controls related to its production of circulating coinage. We conducted fieldwork from January 2018 through April 2019 with subsequent updates in May 2020.

To accomplish our objective, we interviewed Mint officials, all material suppliers, contractors responsible for the quality assurance of raw materials, and Board officials to obtain their perspective on the quality of circulating coinage and

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<sup>1</sup> The term "coin exchange programs" refers to both the Mint's Mutilated Coin Redemption Program and the uncurrent coin redemption process followed by banks in returning uncurrent coins that are worn to the Mint. See the Background section of this report for additional detail.

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involvement with the coin exchange programs. We conducted site visits at the Mint's facilities in Philadelphia, Pennsylvania and Denver, Colorado, as well as at all of the Mint's material suppliers to observe the quality assurance processes used in the inspection and testing of raw materials. Additionally, we observed the Mint's controls over its coin exchange programs for damaged and worn coins at one of the Mint's material suppliers. We also reviewed applicable documentation pertaining to the quality assurance of raw materials for circulating coins and the coin exchange programs including, but not limited to, Mint policies and procedures, quality reports, and the material suppliers' performance data and reports. Appendix 1 provides a more detailed description of our objective, scope, and methodology.

## Results in Brief

We found that the Mint and material suppliers have mature processes in place which yield minimal quality issues. However, we also found that the Mint relies mainly on its material suppliers to ensure the quality of the circulating coin raw materials. Additionally, the Mint's inspections and testing to validate the quality of raw materials were limited and inconsistent between the Mint facilities, and there are opportunities for the Mint to improve controls over quality.

As part of our audit, we reviewed the Mint's coin exchange programs in which coins are returned and then recycled back into raw materials for future coin production. We found the Mint's controls over its coin exchange programs were deficient. The Mint resumed the Mutilated Coin Redemption Program in January 2018 without finalizing or following its draft standard operating procedures (SOP) or having the capability to authenticate coins returned.<sup>2</sup> We also found that there were no formal procedures over the uncurrent coin redemption process. These deficiencies expose the Mint to the risk of paying out tens of millions of dollars for non-genuine U.S. coinage, as well

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<sup>2</sup> The Mint suspended its Mutilated Coin Redemption Program in 2015. See the Background section below for additional detail.



as not being able to ensure that these coins are being melted, as required by law, and recycled.<sup>3</sup>

Due to the significance of these deficiencies, we determined it was essential to immediately share our findings with Mint management. In August 2018, we issued a Notification of Findings and Recommendations (NFR) to the Mint, recommending the Mint strengthen and develop its procedures over mutilated and uncurrent coin redemptions. The recommendation included improving its inspection and sampling methods along with the use of subject matter experts. Furthermore, we recommended that the Mint temporarily suspend shipments of mutilated and uncurrent coins to its material suppliers until after these improvements were implemented. In response to our recommendations, the Mint immediately suspended shipments of mutilated and uncurrent coins to recyclers and formally suspended the Mutilated Coin Redemption Program a year later in July 2019. However, the Mint continued its acceptance of uncurrent coins for redemption without strengthening and developing procedures, which would provide the Mint the ability to authenticate uncurrent coins being redeemed. Following our field work, the Mint provided its updated and finalized SOPs for both the Mutilated and Uncurrent Coin Redemption Programs which the Mint developed in response to concerns raised in this audit report. These updated SOPs will be reviewed in a future audit.

We recommend that the Director of the Mint ensures the Mint:

1. Conducts regular reviews of the suppliers' quality systems to ensure that the suppliers are acting in the best interest of the Mint. This includes regular site visits or periodic reviews of the suppliers' quality system documentation.
2. Develops and implements SOPs that are consistent among Mint facilities to ensure quality assurance processes over sampling, inspection, and testing of materials for circulating coinage are standardized and documented; and that materials

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<sup>3</sup> The Mint's redemption of uncurrent and mutilated coins is a discretionary service offered and not required by law. However under 31 U.S.C. 5120, *Obsolete, mutilated, and worn coins and currency*, U.S. coins withdrawn from circulation, as is done by the Mint through redemptions, are required to be melted.

received meet the specifications required in the contracts and by U.S. law.

3. Considers sampling and testing the material after blanking in order to assess the material quality throughout the coil.<sup>4</sup>

4. Verifies incoming raw material weights to ensure that the Mint is receiving the raw materials paid for.

5. Considers improving raw materials traceability by using a unique number to identify each coil rather than a group lot number.

6. Strengthens and finalizes SOPs for all coin exchange programs before accepting any redemptions. This would include using tests and subject matter experts to authenticate the genuineness of coins redeemed, as well as working with the Board to develop appropriate interagency procedures to assure the integrity of the coin redemption process for uncurrent coins.

7. Follows all SOPs, including but not limited to, procedures related to sampling, inspecting, and testing coins; and appropriately documenting redemptions. Additionally, ensure that adequate background investigations are conducted on bulk redeemers and decisions to allow participation into the Mutilated Coin Redemption Program are based on relevant data from the background investigation. The Mint should add criteria such as obtaining financial statements for analyses of the potential bulk redeemers and performing site visits at their premises as part of the background investigation process for entry into the program. The Mint should document how this criteria was met, and if these steps were not performed, the reasons why.

8. Ensures that all coins returned to the Mint and removed from circulation are destroyed timely and sufficiently accounted for.

In a written response, Mint management concurred with our eight recommendations and outlined the corrective actions, planned or taken, to address our recommendations. Specifically,

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<sup>4</sup> The term blanking refers to the process that makes the rough shape of a coin. See the Background section of this report for additional detail.

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in response to our first recommendation, the Mint has conducted, and continues to conduct, regular reviews of the suppliers' quality systems that include regular site visits. In response to recommendation number 2, the Mint documented and standardized the types of testing conducted on materials for circulating coinage across the Philadelphia and Denver Mint facilities. In response to recommendation number 3, the Mint plans to implement coin blank bend testing in fiscal year 2020. In response to recommendation number 4, the Mint plans to implement procedures to verify incoming raw material weights through statistically appropriate monitoring processes. In response to recommendation number 5, the Mint will consider whether assigning a unique number for traceability up to the blanking press when coil identity is lost by design would be a cost-effective improvement to the Mint's current practice of tracing coils to the blanking press by their original coil and lot identifications as given by the suppliers. In response to recommendation number 6, the Mint has taken actions that include finalizing SOPs; organizing a scientific staff and building a more robust anti-counterfeit capability to improve the Mint's capacity to identify suspected counterfeit coins; and developing procedures to support interagency partners while complying with Mint requirements and good governance. In response to recommendation number 7, the Mint stated it addressed the recommendation for sampling, inspecting, testing, and documenting redemptions in its revised SOP and will assess the resource requirements to conduct robust analysis of potential bulk redeemers and document its decision. Lastly, for recommendation number 8, the Mint stated that the timely destruction and accounting of all coins returned to the Mint is in its revised SOP. The Mint's management response, in its entirety, is included in appendix 2.

Management's response, and corrective actions taken and planned, meet the intent of our recommendations. Management will need to record the estimated date for completing its planned corrective actions as well as the actual date of completed corrective actions in the Joint Audit Management Enterprise System (JAMES), Treasury's audit recommendation tracking system.

Additionally, we also plan to conduct a future audit to assess the effectiveness of the Mint's corrective actions implemented.

## Background

As the sole manufacturer of legal tender coinage for the United States, the efficient and effective production and distribution of circulating coins is the Mint's highest priority.<sup>5</sup> The Mint manufactures billions of circulating coins annually at its facilities in Philadelphia, Pennsylvania and Denver, Colorado.<sup>6</sup> The Mint's circulating coin operations are funded by the supply and sale of circulating coins to the Federal Reserve Banks (FRB).<sup>7</sup> The FRBs issue the circulating coins on behalf of the Mint to the public and business community through depository institutions. In fiscal year 2018, the Mint supplied approximately 13.7 billion circulating coins to the FRBs, which generated \$321 million in seigniorage.<sup>8</sup>

### Circulating Coin Raw Materials

A circulating coin's raw material composition is dependent upon the coin's denomination and is specified by U.S. law.<sup>9</sup> Manufacturing billions of circulating coins annually requires the Mint to purchase hundreds of millions of pounds of raw materials which are supplied in one of two forms.<sup>10</sup> The first

<sup>5</sup> Circulating coins, also referred to as circulating coinage, are the coins used for everyday transactions in trade and commerce and include the penny, nickel, dime and quarter.

<sup>6</sup> The Mint operates a total of six facilities which include West Point, New York; San Francisco, California; Fort Knox, Kentucky; Philadelphia, Pennsylvania; Denver, Colorado; and its headquarters in Washington, DC.

<sup>7</sup> Since 1996, the Mint has operated under the United States Mint's Public Enterprise Fund (PEF) authorized under Public Law 104-52 (31 U.S.C. 5136) and not a congressional appropriation. Mint operations and programs are paid out of the PEF. Revenues determined to be in excess of the amount required by the PEF are transferred to the Department of the Treasury (Treasury) General Fund to help finance national debt.

<sup>8</sup> The Mint receives the face value of the circulating coins delivered to FRBs. Seigniorage is the profit, which is the difference between the cost of making a coin and its face value.

<sup>9</sup> 31 U.S.C. 5112, *Denominations, specifications, and design of coins*, prescribes the material requirements for circulating coins, including the material alloy to be used for each denomination and the physical dimensions such as weight, diameter and thickness.

<sup>10</sup> The Mint obtains its raw materials for circulating coins from three major suppliers using 5-year indefinite quantity contracts.

type is in the form of an alloy strip coil, which is about 13 inches wide, 1,500 feet long, and weighs about 6,000 pounds.<sup>11</sup> Figure 1 below shows a coil.

**Figure 1: Raw Material Coil**



Source: Office of Inspector General (OIG) photograph of a circulating coin raw material alloy strip coil on a forklift at the Denver Mint warehouse.

As part of the Mint's manufacturing process, coin blanks are punched out of the coils. This is the process for all circulating coin denominations except for the penny, for which the Mint purchases raw materials already in the form of coin blanks.<sup>12</sup> Figure 2 below displays coin blanks that have been punched from a coil.

<sup>11</sup> Alloy is a metal made by combining two or more metallic elements, which provides greater strength and resistance to corrosion.

<sup>12</sup> Penny coin blanks are supplied to the Mint in tubs. A tub contains approximately 860,000 penny coin blanks and weighs about 4,700 pounds.

**Figure 2:** Blanks Punched Out of a Raw Material Coil



Source: Image obtained from a March 2016 Mint press release.

Approximately 80 percent of material from a coil is utilized during the process when coin blanks are punched out of a coil.<sup>13</sup> The remaining 20 percent becomes production scrap material.<sup>14</sup> Figure 3 below displays scrap material which is produced after coin blanks are punched out of a coil.

**Figure 3:** Production Scrap Material



Source: Image provided by the Mint.

### Mint's Raw Material Contracts

The Mint's contracts with its material suppliers specify that the composition of raw materials provided for circulating coins meet the requirements prescribed under U.S. law, and include specific dimensional, thickness, and other physical requirements for

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<sup>13</sup> OIG analysis based on a 3-year average of Mint coil purchases and coil scrap material figures.

<sup>14</sup> Production scrap material includes the excess material left from punching coin blanks from coils referred to as web scrap, as well as condemned coins or blanks rejected during the manufacturing process for various quality reasons.



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which the Mint conducts various inspections and tests to assess the raw materials conformity. These include:

- visual inspections for defects and damage;
- dimensional and thickness inspections with a micrometer; and
- hardness testing and chemical analysis.

Additionally, the Mint's contracts require its material suppliers to have a quality control process in place as a means of helping to ensure quality standards will be met. Another component of the Mint's contracts is the requirement that material suppliers accept and recycle scrap material generated during the complete life-cycle of a coin.<sup>15</sup> The scrap material is to be recycled back into the raw materials the Mint purchases to produce new circulating coinage. The scrap material includes production scrap generated during the Mint's circulating coin manufacturing process, as well as coins previously issued into circulation which have been returned to the Mint through the Mint's coin exchange programs.

### Mint's Coin Exchange Programs

The Mint takes possession of circulating U.S. coins through redemptions of uncurrent and mutilated coins. The Mint receives uncurrent coins from FRBs and mutilated coins from the public. Uncurrent coins are worn coins, but are machine countable and their genuineness and denominations are still recognizable. FRBs accumulate uncurrent coins, which the Mint collects and compiles at the Mint's Philadelphia facility before the uncurrent coins are sent to the Mint's material suppliers to be melted and recycled back into raw materials.<sup>16</sup>

Mutilated coins are bent or partial coins that are not machine countable, but their genuineness and denominations are still recognizable. The Mint operates the Mutilated Coin Redemption Program, which allows individuals and businesses to redeem

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<sup>15</sup> The Mint receives a credit, based on market scrap value price, from material suppliers for scrap material returned.

<sup>16</sup> The Mint credits FRB the face value of uncurrent coins that FRB redeemed.

mutilated coins for reimbursement.<sup>17</sup> Mutilated coins are received, inspected, and sampled by the Mint at either its Philadelphia facility or at its material suppliers. The mutilated coin inspection and sampling location is determined by the weight amount of mutilated coins being redeemed.<sup>18</sup> The Mint incurs a loss on the Mutilated Coin Redemption Program because the Mint pays face value for the redeemed coins, but then only receives scrap value for the coins from its material suppliers when the coins are recycled.

In 2014, the last full year before the Mutilated Coin Redemption Program was suspended, the Mint paid approximately \$30 million to redeemers for 1.5 million pounds of mutilated dimes and quarters which were then sold for scrap to recyclers. The historical difference between the scrap value and the redemption price of dimes and quarters is \$16 per pound; and as such, the Mint incurred a loss of approximately \$24 million.<sup>19</sup>

In November 2015, the Mint suspended its Mutilated Coin Redemption Program to develop additional safeguards because of possible unlawful activity. To assist the Mint in this process, the Mint awarded task orders to PricewaterhouseCoopers LLP (PWC), who was already working with the Mint under a 5-year

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<sup>17</sup> 31 CFR part 100.11, *Request for examination of bent or partial coin for possible redemption*, section (b), defines (1) bent coins as U.S. coins which are bent or deformed so as to preclude normal machine counting but which are readily and clearly identifiable as to genuineness and denomination; and (2) partial coins as U.S. coins which are not whole; partial coins must be readily and clearly identifiable as to genuineness and denomination.

<sup>18</sup> Individuals and businesses which redeem in excess of 5,000 pounds of coins at a time ship the coins directly to the Mint's material supplier after receiving authorization with instructions from the Mint. Redemptions under 5,000 pounds are sent to the Mint's Philadelphia facility where they are combined with other redeemed coins and then sent to the Mint's material supplier.

<sup>19</sup> Coin redemptions are paid on a weight-equivalent formula, which results in an amount paid by the Mint that is equal to the coins' face values. A 2016 assessment conducted by PricewaterhouseCoopers LLP (PWC) for the Mint stated that the historical difference between the scrap value and the redemption price of the clad coins, which are dimes and quarters denominations, is \$16 per pound. Additionally, PWC found that historically over 70 percent of coins redeemed are clad denominations.



contract.<sup>20</sup> According to the Mint's statement of work for PWC, it was suspected that there was a fraudulent scheme which involved the production of counterfeit U.S. coins at foreign factories. These coins are mutilated and imported into the United States and then fraudulently submitted to the Mint for cash reimbursement through the Mutilated Coin Redemption Program. In January 2018, the Mint resumed the Mutilated Coin Redemption Program after making revisions that were intended to update and improve the integrity of the mutilated coin redemption process.<sup>21</sup>

## Audit Results

We found that the Mint and its material suppliers have mature processes in place which yield minimal quality issues. However, we also found that the Mint relies mainly on its suppliers' systems and certifications to ensure the quality of raw materials. Additionally, the inspections and testing conducted by the Mint to validate the quality of incoming raw materials were limited and inconsistent between Mint facilities. We also noted opportunities for the Mint to improve controls over quality exist. In addition, we looked at the materials that were returned through the Mint's coin exchange programs, as these materials are used by the Mint's material suppliers to fabricate new raw materials used to make U.S. circulating coinage. We found that the controls over the Mint's Mutilated Coin Redemption Program and the uncurrent coin redemption process are deficient.

Specifically, as discussed above, in November 2015, the Mint suspended its Mutilated Coin Redemption Program to develop additional safeguards because of possible unlawful activity. Subsequently, in January 2018, the Mint resumed the Mutilated

<sup>20</sup> Three task orders were added to the existing contract to address the Mint's concerns related to the Mutilated Coin Redemption Program. PWC's U.S. public sector business, which was responsible for the task orders, was renamed Guidehouse after being acquired by Veritas Capital in May 2018 and are referred to as PWC throughout this report. The initial contract was to provide an annual assessment of the Mint's internal control over financial reporting in accordance with the Office of Management and Budget Circular A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control*, and financial advisory services.

<sup>21</sup> Department of the Treasury, United States Mint, *Exchange of Coin*, Final Rule, *Federal Register*, Vol. 82, No. 243, (December 20, 2017) page 60309-60312.  
<https://www.gpo.gov/fdsys/pkg/FR-2017-12-20/pdf/2017-27026.pdf>

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Coin Redemption Program after making revisions that were intended to update and improve the integrity of the mutilated coin redemption process. However, our review found that the Mint resumed the Mutilated Coin Redemption Program without finalizing or following a draft SOP in place over the program. Although the SOP acceptance criteria identifies counterfeit coins as an unacceptable item, the draft SOP failed to require any tests or use of subject matter experts to make this determination. As a result, we found the Mint processed the mutilated coin redemptions without the capability to authenticate the genuineness of the coins.

Additionally, we found that there were no formal SOPs over the uncurrent coin redemption process. We found that the genuineness and complete melting of coins exchanged could not be assured. These control deficiencies exposed the Mint to the risk of paying out tens of millions of dollars for non-genuine U.S. coinage, as well as not being able to ensure that coins withdrawn from circulation are melted.

Due to the significance of these deficiencies, we determined it was essential to immediately share our findings with Mint management. In August 2018, we issued a NFR to the Mint, recommending the Mint strengthen and develop its procedures over mutilated and uncurrent coin redemptions. The recommendation included improving its inspection and sampling methods along with the use of subject matter experts. Furthermore, we recommended that the Mint temporarily suspend shipments of mutilated and uncurrent coins to its material suppliers until after these improvements were implemented. In response to our recommendations, the Mint immediately suspended mutilated and uncurrent shipments to recyclers and, in July 2019, officially, once again, suspended the Mutilated Coin Redemption Program. However, the Mint continued its acceptance of uncurrent coins for redemption without strengthening and developing procedures.

**Finding 1****Mint Relies Mainly on its Material Suppliers For Raw Materials Quality Assurance of Circulating Coins**

We found that the Mint and material suppliers have mature processes in place which yield minimal quality issues; however, controls can be improved. We also found that the Mint relies mainly on the suppliers' Quality Management System (QMS) and International Standards Organization (ISO) certification to ensure the quality of the raw materials.<sup>22</sup> Additionally, the inspection and testing conducted by the Mint to validate the quality of incoming raw materials is limited and inconsistent between Mint facilities. The Mint has two primary controls to ensure the quality of raw materials for circulating coins.<sup>23</sup> First, the Mint requires that its material suppliers have a QMS to help ensure materials supplied to the Mint meet the contract standards. Second, the Mint inspects and tests circulating coin raw materials.

**Mint Has Not Conducted Regular Reviews of Material Suppliers' Quality Management Systems**

We found that all of the Mint's circulating coin material suppliers had a QMS in place and were ISO certified.<sup>24</sup> Included in the material suppliers' QMSs were SOPs, standard data keeping, routine operator inspections, automated controls, and designated quality specialists. The material suppliers' QMSs also included the use of laboratories to conduct testing on chemical composition and the physical characteristics to ensure raw materials meet Mint contract specifications. Mint officials and its material suppliers told us that the material suppliers' QMSs

<sup>22</sup> A QMS is a formalized quality system that documents processes, procedures, and responsibilities and helps to coordinate and direct activities to meet customer requirements. ISO 9001 is an international standard which defines standardized quality assurance processes based on industry best practices. ISO 9001 is the most prominent approach in specifying requirements for QMS.

<sup>23</sup> According to GAO, *Standards for Internal Control in the Federal Government* (GAO-14-704G; issued Sep. 2014), a control comprises the plans, methods, policies, and procedures used to fulfill the mission, strategic plan, goals, and objectives of an entity.

<sup>24</sup> An ISO 9001 recertification audit is done every 3 years by an independent party. Additionally, annual ISO surveillance audits occur each year and there are internal auditors, who are personnel of the suppliers, used for ongoing monitoring.

were operating as intended and that quality issues with raw materials occurred infrequently.

To monitor material suppliers' performance, the Mint uses a Quality Scorecard Program. The intent of the program is to measure the performance of material suppliers in meeting contract requirements in four areas, including:

- QMS assessments of the material suppliers,
- Raw material quality assessments,<sup>25</sup>
- Timeliness and completion of raw material delivery, and
- Corrective Action/Preventive Action Program.<sup>26</sup>

We found that the Mint monitored its material suppliers' performance in all areas except for the QMS assessments. As a result, the Mint relied on its material suppliers' QMSs to ensure raw materials quality without performing QMS assessments. When we asked for the date the Mint had last conducted a QMS assessment, which includes a material supplier site visit or a documentation review, neither the Mint nor its material suppliers could provide a time when one had been conducted. In fact, Mint officials and material suppliers could not recall any on-site inspections or reviews of the material suppliers' QMSs by the Mint within the last 5 years. According to the Mint's Supplier Scorecard SOP, QMS assessments are completed during the initial contract evaluation for each supplier and as determined necessary. The SOP also states that supplier certification to ISO standards may preclude the need for a QMS assessment.

The Mint's Chief of Quality told us that the Mint had travel restrictions due to budget constraints and has not been able to conduct inspections at material suppliers in a number of years. Additionally, we were told by Mint officials that they did not feel the need to conduct QMS assessments because there were minimal raw material quality issues and the material suppliers'

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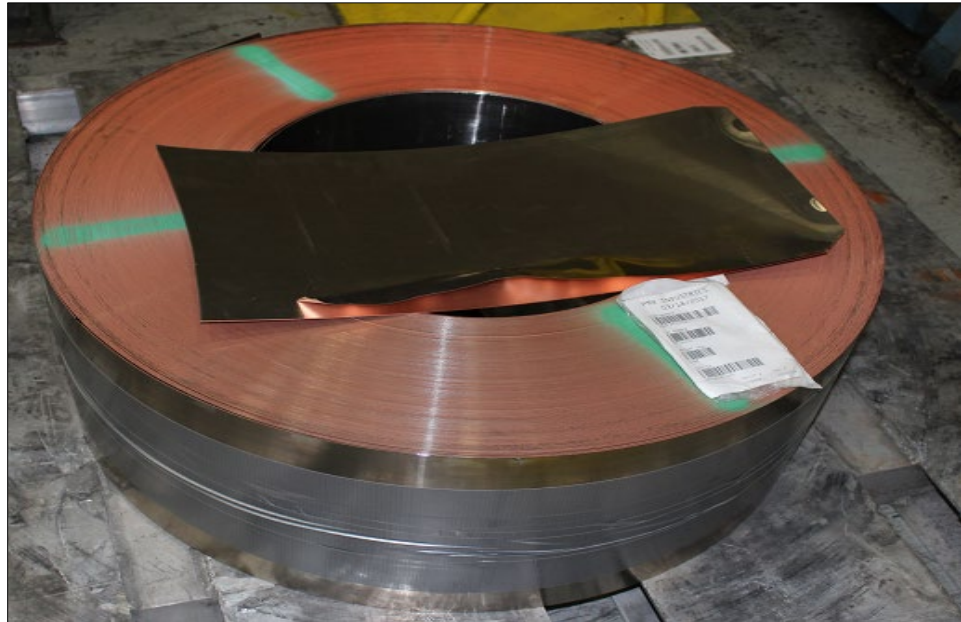
<sup>25</sup> Raw materials quality is monitored by the Mint through sampling incoming raw materials. Quality can also be determined indirectly during the manufacturing process if issues are found.

<sup>26</sup> The Corrective Action/Preventive Action Program tracks issues, including material quality issues and the corresponding corrective actions until an issue is resolved. This includes issues identified in Non-Conformance Reports (NCR).

ISO certifications provide sufficient evidence that there are adequate quality assurance processes in place. Furthermore, the Mint could request the material suppliers' QMS documentation, if needed.

Based on our analysis, we concur that there were relatively few material quality issues of the coils, of which none identified were related to raw material chemical composition of the coils. The most problematic material quality issue experienced was delamination.<sup>27</sup> From fiscal years 2015 through 2017, 46 out of 80 Non-Conformance Reports (NCR), or approximately 60 percent, related to delamination.<sup>28</sup> Figure 4 below displays a delaminated segment of coil.

**Figure 4:** A Segment of Delaminated Coil



Source: Photograph from a Mint April 2017 internal quality report.

<sup>27</sup> Delamination is the separation of the outer layer of a coin, or blank, due to incomplete bonding or impurities and is more likely to occur when the alloy is subjected to stress as during the process when a coin is struck. According to Mint officials, delamination can occur in any part of the coil and predominately occurs in quarters, as it is a clad alloy.

<sup>28</sup> A NCR is issued when a quality problem is identified. Our analysis identified that from fiscal years 2015 through 2017, the Mint received approximately 43,000 coils and issued 80 NCRs related to raw materials quality.

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For penny blanks, we also found there were relatively few material quality issues, which mostly related to staining or spotting on the surface of the penny blanks.<sup>29</sup>

While we concur with the Mint that a small amount of raw material quality issues may indicate that the raw material suppliers' QMSs are operating as intended, we also believe that regular site visits to monitor the suppliers' quality systems or reviews of QMS documentation by Mint personnel are important management practices to ensure the continued quality of raw materials. In addition, the Mint should be actively involved in the review of quality requirements and practices of its material suppliers that the Mint deems are important, which may not be included in the ISO 9001 standards that the material suppliers are following.

### Raw Materials Inspection and Testing is Inconsistent and Not Fully Implemented

During our review, we found that the Mint inspects and tests circulating coin raw materials at both its Philadelphia and Denver facilities; however, not all circulating coin raw materials are inspected and tested prior to being used in production. We also found that the Mint could not trace quality issues identified in production back to the coil from which the coins originated. Additionally, we found that the Mint's inspection and testing of raw materials, including documentation and procedures between Mint facilities, was inconsistent or absent and that neither Mint facility validates the quantity of circulating coin raw materials received.

### Raw Materials Quality Not Validated

According to Mint officials, quality assurance of circulating coin raw materials begins prior to the shipment of the raw material coil by the material supplier. A sample from the coil, called a

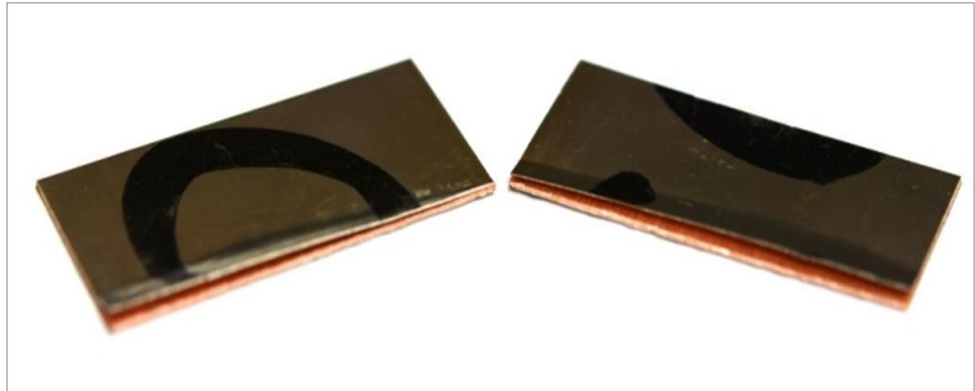
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<sup>29</sup> Penny blanks have a zinc-copper alloy exterior which is prone to staining or spotting when exposed to high moisture or humidity. The Mint identifies these issues through visual inspections. Our review of the Mint's NCRs from fiscal years 2015 through 2017 showed that the Mint had eight NCRs related to material quality of the penny blanks. The Mint received approximately 32,000 tubs of penny blanks during the same period.



coupon, is sent to the respective Mint facility which plans to use the coil in the production of coins.<sup>30</sup> We were told by Mint procurement and quality officials that the coupons are tested against a number of parameters that include, among other items, testing for delamination, physical dimensions, and chemical analysis to assure material suppliers are adhering to the contract. We were told by Mint officials that the coil shipment to the Mint does not proceed if the coupon does not pass the Mint's testing. Additionally, a visual inspection of the coil for damage of raw material is conducted during the receipt at Mint facilities.<sup>31</sup> Figure 5 below displays a coupon in which the alloy had separated and failed the delamination test.<sup>32</sup>

**Figure 5:** A Delaminated Coupon



Source: Mint photograph from a September 2015 Mint internal quality report.

We reviewed the Mint's raw materials quality assurance procedures and documentation, and spoke to staff responsible in each facility for coupon testing. We found that, despite Mint's procedures requiring all coupons to be tested, most of

<sup>30</sup> Material suppliers are contractually obligated to send a small sample, the coupon, cut from each coil in advance of the coil shipment for testing. Each coupon is labeled with an identification number by the material supplier so it can be traced back to the respective coil from which it originated.

<sup>31</sup> In addition to testing coupons, the Mint employs various automated controls and has regular operator checks and designated quality assurance specialists who conduct various forms of coin testing during production. Observations are logged and material issues will result in a NCR to the material supplier.

<sup>32</sup> A delamination test, also known as a bend test, bends the coupon in a 90 degree angle. The coupon can break in half as seen in figure 4, but the material should not separate, which this picture displays.

the coupons were not tested. Our analysis found that the Mint only documented tests for about 13 percent of the coupons.<sup>33</sup> Additionally, most of the coupons were tested a week after the coil was received by the Mint.

Philadelphia Mint officials told us that they test about 1 out of every 6 coupons received. According to Philadelphia Mint officials, the number of coupons tested has decreased because the quantity of quality issues found has decreased.<sup>34</sup> Denver Mint officials told us that all coupons were tested. However this could not be substantiated because not all the test results were recorded. We observed a Denver Quality Specialist test coupons for a shipment of eight coils, in which one coupon failed the thickness test. The system being used to record coupon testing displayed a single entry on each date going back months when there should be evidence of multiple data entries on each day. When we asked the reason for not recording all coupon testing data, we were told that there may be some different processes used between different shifts at the Denver facility, resulting in the test data being recorded differently.

*GAO Standards for Internal Controls in the Federal Government* calls for managers to clearly document internal controls and all transactions and other significant events. Documentation and records should be properly managed and maintained.<sup>35</sup> Additionally, the Federal Records Act requires each federal agency to make and preserve records necessary to document the agency's policies, decisions, procedures, and essential transactions.<sup>36</sup>

We believe that the Mint should adhere to its testing procedures and document the results of those tests accordingly to ensure

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<sup>33</sup> OIG analysis is based upon total coils received and total number of coupons received in 2017. The Mint tested approximately 1,700 coupons for 12,800 coils, which is approximately 13 percent.

<sup>34</sup> Material suppliers typically send six to eight coils per truckload to the Mint facilities due to road weight limitations. Correspondingly, the Mint receives six to eight coupons at a time representing samples from the upcoming coils to be shipped.

<sup>35</sup> GAO, *Standards for Internal Control in the Federal Government* (GAO-14-704G; issued Sep. 2014).

<sup>36</sup> 44 U.S.C. 3101, *Records management by agency heads; general duties*.



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that testing is conducted and the results of these tests are recorded.

#### Defects Found in Production Not Traceable Back to Raw Materials

Our review of the Mint's sampling data, receiving records, and production logs determined that the Mint is unable to trace all production defects back to the specific coils where the defects originate. We found that this is due to the Mint not using a unique number to identify each coil, but instead identifying coils in a group lot number. This prevents the Mint from determining the source of quality issues which makes quality control more difficult and may result in the Mint putting bad materials into production. According to Treasury Directive 80-05, *Department of the Treasury Records Management*, all Treasury bureaus are to establish adequate and proper documentation of their functions, policy decisions, procedures, and essential transactions in a manner that promotes accountability and establishes a historical record.<sup>37</sup>

#### Testing and Inspection Procedures Not Consistent Between Facilities or Absent

We found that policies and procedures for testing were not consistent between each facility, which resulted in not all tests being performed and logged for each coupon tested. Although both facilities tested some coupons for physical characteristics such as hardness and thickness, the following tests were not consistent or documented:

- Philadelphia Mint did not conduct delamination testing on coupons.
- Denver Mint officials stated coupons are tested for delamination, but they did not document the results.

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<sup>37</sup> Treasury Directive 80-05, *Department of the Treasury Records Management* (June 26, 2002), was superseded by a revised version dated January 2018; however, the sections and requirements referred to in the document are still in effect due to the Federal Records Act (44 U.S.C. 3101 et. Seq.).

- Denver Mint did not conduct chemical analysis on the coupons.<sup>38</sup>
- At the time of our May 2018 site visit to the Philadelphia facility, we found chemical analysis testing had been suspended in January 2018 due to equipment failure and had not resumed after replacement equipment was on-site.
- Philadelphia lacked formal written procedures over penny blank inspection and testing.<sup>39</sup>

According to GAO's *Standards for Internal Controls in the Federal Government*, management is responsible for designing policies and procedures and building them in as an integral part of the entity's operations.

Mint officials told us that the overall processes used to produce and test raw materials were mature and yielded minimal quality issues. In addition, quality issues could be found in production through automated controls, as well as operator tests and quality teams who inspect coins throughout the Mint's production process.

Though raw material issues are minimal, it is good management practice to ensure the controls over the inspection and testing of raw materials are formalized and consistent between facilities to safeguard the quality of circulating coin raw materials provided to the Mint. Additionally, the Mint should consider conducting periodic testing of the blanks produced by the Mint for physical specifications such thickness, weight, and clad strength. Mint officials and the material suppliers stated that delamination could occur at any place in the coil. Testing the blanks would help ensure that the quality is uniform throughout the coil.

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<sup>38</sup> According to a Mint internal memo, the Denver facility suspended chemical analysis on the coupons' chemical composition in 2003. During that time, a cost benefit analysis concluded that testing of the alloy composition was no longer necessary since no alloy composition deviations had been found, the supplier tests are available for audit upon request, and the suppliers were ISO certified.

<sup>39</sup> As penny coin blanks are supplied to the Mint, penny coin blank sampling consists of selecting 800 penny blanks a week from a single tub where a visual inspection and weight test is conducted after which the diameter and edge thickness of ten penny coin blanks are inspected and a hardness test conducted.

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### Raw Material Weights Not Verified

We found that neither Philadelphia nor Denver have procedures for verifying raw material weights. The Mint pays approximately \$400 million annually for circulating coin raw materials, which is based on the weight. However, we found that circulating coin raw materials are received and put into inventory without verifying the accuracy of the weight. We were told by Mint officials that they rely on the weight provided by the material suppliers in the shipping information and discrepancies are adjusted during the Mint's annual physical inventory.

GAO's *Best Practices in Achieving Consistent, Accurate Physical Counts of Inventory and Related Property* states that there are many factors that can cause the record of on-hand inventory to differ from the physical quantity counted.<sup>40</sup> The lack of reliable information impairs the government's ability to safeguard its assets, among other things, from theft, loss or mismanagement. Based on the results of a Mint sample of 20 coils weighed during its 2018 analysis, we believe not verifying raw material weights may result in overpaying for raw materials.<sup>41</sup>

### Recommendations

We recommend that the Mint Director ensures the Mint:

1. Conducts regular reviews of the suppliers' quality systems to ensure that they are acting in the best interest of the Mint. This includes regular site visits or periodic reviews of the suppliers' quality system documentation.

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<sup>40</sup> GAO, *Best Practices in Achieving Consistent, Accurate Physical Counts of Inventory and Related Property* (GAO-02-477G; issued March 2002).

<sup>41</sup> Our conclusion is based on the results of a Mint sample of 20 coils weighed during 2018. The sample showed that 14 out of 20 coils, or 70 percent, weighed an average of 11 pounds less than the material suppliers stated weight. The Philadelphia and Denver facilities received a combined total of approximately 12,000 coils during 2017, which could result in a significant amount of overpayments if these coils are consistently lower in weight than the stated weight on the invoice.

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### Management Response

Management concurred with the recommendation. Management stated that the Mint has conducted, and continues to conduct, regular reviews of the suppliers' quality systems that include regular site visits. Management further stated that from fiscal years 2013 to 2015, the Mint conducted five quality site visits and reviews at the suppliers. Management also stated that this was followed by a two-year gap in visits; however, non-conforming material notifications and corrections continued. The Mint also increased supplier reviews and visits with four visits in fiscal year 2018 and five visits in fiscal year 2019. The focus of these visits has been on supplier correction actions and Quality Management System records. Supplier reviews are planned for fiscal year 2020.

### OIG Comment

Management's response and corrective actions, planned and taken, meet the intent of our recommendation. Management will need to record the estimated dates for completing its planned corrective actions as well as the actual dates of completed corrective actions in JAMES, Treasury's audit recommendation tracking system.

2. Develops and implements SOPs that are consistent among Mint facilities to ensure quality assurance processes over sampling, inspection, and testing of materials for circulating coinage are standardized and documented; and that materials received meet the specifications required in the contracts and by U.S. law.

### Management Response

Management concurred with the recommendation. Management stated that the Mint documented and standardized the types of testing conducted on materials for circulating coinage across the Philadelphia and Denver Mint facilities. All coil coupons are now tested and the Philadelphia facility restarted penny blank sampling in fiscal year 2018. Management also stated that the Mint's quality assurance strategy seeks to reduce supplier delaminations during the supplier's production while improving quality control with more robust sampling. As to the Mint not

testing all raw material, Management stated that sampling is a function of risk management and problem detection and that it is not mathematically reasonable to test everything.

OIG Comment

Management's response and corrective actions taken meet the intent of our recommendation. Management will need to record the actual dates of completed corrective actions in JAMES, Treasury's audit recommendation tracking system.

3. Considers sampling and testing the material after blanking in order to assess the material quality throughout the coil.

Management Response

Management concurred with the recommendation. Management stated that the Mint will implement coin blank bend testing in fiscal year 2020. The Mint currently monitors the blanking of the coil by checking the thickness and diameter.

OIG Comment

Management's response and planned corrective action meet the intent of our recommendation. Management will need to record the estimated date for completing its planned corrective action in JAMES, Treasury's audit recommendation tracking system.

4. Verifies incoming raw material weights to ensure that the Mint is receiving the raw materials paid for.

Management Response

Management concurred with the recommendation. Management stated that the Mint will implement procedures to verify incoming raw material weights through statistically appropriate monitoring processes. Management also stated that the Mint will continue to monitor finished coin, bulk bag weights, and count data to evaluate weight variances in the inventory to protect the Mint's working capital.

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OIG Comment

Management's response and planned corrective action meet the intent of our recommendation. Management will need to record the estimated date for completing its planned corrective action in JAMES, Treasury's audit recommendation tracking system.

5. Considers improving raw materials traceability by using a unique number to identify each coil rather than a group lot number.

Management Response

Management concurred with the recommendation up to the blanking press when coil identity is lost by design. Management stated that the Mint currently does accurately trace coils to the blanking press by their original coil and lot identifications as given by the suppliers. The Mint uses these identifications to contain and control non-conforming material as needed. Accordingly, Management stated that the Mint will consider whether assigning a unique number would be a cost-effective improvement to its current practice.

OIG Comment

Management's response and planned corrective action meet the intent of our recommendation. Management will need to record the estimated date for completing its planned corrective action in JAMES, Treasury's audit recommendation tracking system.

**Finding 2****Controls Over the Mint's Coin Exchange Programs Are Deficient**

We found that the controls over the Mint's Mutilated Coin Redemption Program and the uncurrent coin redemption process were deficient. Additionally, we found that the Mint resumed the Mutilated Coin Redemption Program without finalizing or following a draft SOP in place over the program. Specifically, although the SOP acceptance criteria identifies counterfeit coins as an unacceptable item, the draft SOP failed to require any

tests or use of subject matter experts to make this determination.

As a result, we found the Mint processed the mutilated coin redemptions without the capability to authenticate the genuineness of the coins. We also found that there were no formal SOPs over the uncurrent coin redemption process. As a result of these deficiencies, the genuineness and recycling of coins redeemed through the Mint's coin exchange programs could not be assured. These deficiencies expose the Mint to the risk of paying out tens of millions of dollars for non-genuine U.S. coinage, as well as not being able to ensure that these coins are being melted and recycled.<sup>42</sup>

Due to the significance of these deficiencies, we determined it was essential to immediately share our findings with Mint management. In August 2018, we issued a NFR to the Mint recommending the Mint strengthen and develop its procedures over mutilated and uncurrent coin redemptions. The recommendation included improving its inspection and sampling methods along with the use of subject matter experts. Furthermore, we recommended that the Mint temporarily suspend shipments of mutilated and uncurrent coins to its material suppliers until after these improvements were implemented. In response to our recommendations, the Mint suspended mutilated and uncurrent shipments to recyclers until all SOPs are updated and personnel are trained. The Mint formally suspended the Mutilated Coin Redemption Program again in July 2019.<sup>43</sup> However, the Mint continued accepting uncurrent coins for redemption without strengthening and developing procedures to ensure its ability to authenticate uncurrent coins redeemed.

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<sup>42</sup> Following completion of OIG fieldwork on this audit, the Mint provided updated and finalized SOPs for both its Mutilated and Uncurrent Coin Redemption Programs. These SOPs were not reviewed as part of this audit and will be reviewed in a future audit.

<sup>43</sup> Department of the Treasury, United States Mint, *Suspension of Bent and Partial Coin Exchange by United States Mint*, Notice, *Federal Register*, Vol. 84, No. 140, (July 22, 2019) page 35181. <https://www.govinfo.gov/content/pkg/FR-2019-07-22/pdf/2019-15490.pdf>. The Mint announced the second suspension of the Mutilated Coin Redemption Program. The Mint had initially suspended this program in November 2015.

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## Certification Process Needs Improvement

Following the program's initial suspension in 2015, the Mint resumed the Mutilated Coin Redemption Program in January 2018 after implementing revisions aimed to improve security and minimize the potential for fraudulent activity, such as the redemption of non-genuine U.S. coinage. This included the development of a draft SOP, which according to Mint officials, contains two primary controls to strengthen the program. The two controls include a participant certification process and sampling to authenticate mutilated coin redemptions to reduce the risk of accepting non-genuine U.S. coinage.

Specifically, participants that redeem over 5,000 pounds of mutilated coins annually are called bulk redeemers and require a certification, which is a background investigation, to participate in the program.<sup>44</sup> The Mint's draft SOP calls for one of two levels of certification based upon the redemption amount. A greater level of due diligence in the background investigation is to be conducted for higher certification levels.<sup>45</sup> The Mint's SOP also calls for participants requiring certification to be notified of the background investigation. Failure by a participant to give authorization or requested information to the Mint will result in their denial to participate in the Mutilated Coin Redemption Program. According to Mint officials, the majority of mutilated coins submitted for redemption are from bulk redeemers.<sup>46</sup>

Additionally, according to the Mint, a critical element for mitigating potential fraud within the Mutilated Coin Redemption Program is establishing a comprehensive vendor certification program. The SOP also identifies that both a site visit and a financial statement audit are options to check for potentially illegal activity. However, we found that neither of these two reviews occurred. We were told by Mint officials that the Mint would have conducted a site visit if necessary. However, the

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<sup>44</sup> All participants must submit an application, which is to include, among other information, how the participant came into possession of coins each time there is a redemption.

<sup>45</sup> The Mint contracted PWC to conduct the certification process in which a background report is supplied to the Mint. The Mint determines the level of certification/due diligence that PWC will provide. Recertification is required every 3 years.

<sup>46</sup> OIG analysis found that bulk redeemers accounted for 99 percent of the amount of mutilated coins redeemed since the Mutilated Coin Redemption Program resumed in January 2018.



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majority of applicants did not have audited financial statements and the Mint felt that site visits would not yield significant information.

Our review of one background investigation report provided to the Mint found that a bulk redeemer had the same address location as a massage parlor. After the Mint approved this bulk redeemer's certification, the participant submitted approximately 30 thousand pounds of coins to the Mint for redemption of which the Mint took possession. The background investigation provided to the Mint by PWC also provided an image of the applicant's business location which was a single entity operating a massage parlor business.<sup>47</sup>

While the Mint did not consider either a financial statement audit or a site visit as necessary and since these are options in vetting applicants, we believe that the Mint needs to establish criteria in its SOP for when documented reviews of financial statements and site visits of potential bulk redeemers are necessary as these processes are essential in order to fully vet applicants considered risky. Additionally, we consider the businesses which are redeeming millions of dollars in coins and yet claim not to have audited financial statements to be suspicious. We believe these businesses should have a site visit.

We asked the Mint official that managed the Mutilated Coin Redemption Program who was involved in the certification approval process and if the Mint had denied anyone into the Mutilated Coin Redemption Program and were told that no one had been denied. The decision to allow high risk participants into the program involved multiple personnel, which included the Mint's Chief Financial Officer, Mint's legal group and the manager of the Mutilated Coin Redemption Program.

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<sup>47</sup> According to PWC, the information used in creating the background report is provided by either the Mint or gathered from public information. If the participant does not provide financial information to the Mint and the information is not publically available, PWC does not perform a financial analysis nor does PWC conduct a site visit as it is not within the scope of its task order. The approval or rejection of a participant's certification is at the sole discretion of the Mint.

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## Mutilated Coin Redemption Program SOP Not Followed

The Mutilated Coin Redemption Program draft SOP outlines the mutilated coin submission process, which includes the sampling and inspection processes to determine if the mutilated coins meet the Mint's acceptance criteria. According to Mint and PWC officials, the SOP should help mitigate risks found during the previous program, including the risk of redeeming non-genuine U.S. coinage and accepting mutilated coins as uncurrent. There are eight types of items considered to be unacceptable if found in a redemption.<sup>48</sup>

As part of our audit, we observed the Mint's mutilated coin redemption process in which the Mint received approximately 450 thousand pounds of mutilated coins from multiple bulk redeemers during August 2018. While we found that Mint personnel visually inspected the mutilated coins, we also found that they were largely unaware of the specific sampling and receiving requirements in the SOP. As a result, Mint personnel were not properly following critical processes outlined in the Mint's SOP.

Specifically, we observed that Mint personnel did not complete the following procedures outlined in the SOP to:

- Verify that trucks are secured and sealed upon arrival and coin return authorization is included with the shipment,
- Observe the receipt and weighing in on the truck scale,
- Obtain a picture of sampled container contents,
- Sample a required quantity of coins from each selected container, and
- Inspect the coins in the prescribed method to ensure the submitted coins meet the Mint's acceptance criteria.

According to the Mint's SOP mutilated coin sampling plan, the inspection process consists of sampling a specified number of coins which are to be removed from a container, poured into an inspection area, and then inspected against the Mint's

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<sup>48</sup> Included among the eight types of unacceptable items are foreign coins, slugs, miscellaneous metal (i.e. nuts, bolts, and washers), counterfeit coins and uncurrent coins.

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acceptance criteria. However, we observed the number of coins inspected and sampled by Mint personnel was only a small fraction of the number required per the SOP. Additionally, we found Mint personnel conducting the redemption were unable to immediately provide the certification level of the redeemers, which is necessary information, to ensure the level of sampling to be conducted. According to the Mint's contractor, PWC, the SOP sampling plan was created to determine if the coins being redeemed met the definition of mutilated coins and that the sampling plan must be followed in order to have confidence that the coins sampled are representative of the entire redemption shipment.

We also did not observe any formal documentation being used to record the sampling conducted for mutilated coins. The SOP requires that an inspection log be used during the inspection process to track and record the results. When we presented our concerns that the methodology from the Mint's SOP was not being followed to the Mint personnel conducting the inspection and sampling, a Mint official told us that the SOP was a draft and the procedures and documents referenced in the SOP were not finalized.

Furthermore, we found that although SOP acceptance criteria identifies counterfeit coins as an unacceptable item, the draft SOP failed to require any tests or use of subject matter experts to make this determination. As a result, we found the Mint processed the mutilated coin redemptions without the capability to authenticate of genuineness of the coins. Additionally, the SOP was biased towards accepting redemptions because sampling tolerances allow a percent of non-genuine coins to be redeemed. The SOP also allows for a second sample to be drawn only in the instance where the number of an unacceptable item is exceeded during the initial sample.

#### Redemptions Exceeded SOP Acceptance Criteria

As part of our review of the Mint's mutilated coin redemption process, we obtained samples from the redemptions. We found instances where coins redeemed did not meet the Mint's acceptance criteria, including coins that were not readily and clearly identifiable as genuine U.S. coinage and distinguishable

by denomination.<sup>49</sup> For example, in one redemption, we identified that many of the coins returned as mutilated appeared to be uncurrent coins. We raised our concern to the Mint official in charge of the redemption and were told that, based on his visual inspection, the redemption met the Mint's acceptance criteria. We obtained a sample from this redemption and found our sample to have approximately double the percentage of uncurrent coins allowable under the Mint's acceptable criteria for mutilated coins.<sup>50</sup>

Additionally, we observed the material supplier processing containers during the mutilated coin redemption. We noted instances in which coins returned appeared to contain foreign contaminants or were otherwise not clearly recognizable as genuine U.S. currency.<sup>51</sup> According to the draft SOP, samples of a redemption can include a certain percentage of foreign coins, slugs, and miscellaneous metals. The figure below displays coins from our sample, which are not clearly recognizable as U.S. currency.

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<sup>49</sup> OIG samples were obtained from bulk redeemers' containers. The coins were obtained from various locations in the containers.

<sup>50</sup> OIG analysis is based on 112 coins obtained from one redemption of mutilated coins submitted by a redeemer that were scheduled to be melted.

<sup>51</sup> The material supplier's sampling/inspection process, as part of its receiving process for accepting materials, consisted of the following: 1) a visual inspection; 2) use of a spectrometer to measure coinage composition; and 3) use of a magnetic rod to look for contaminants, as all U.S. coins are non-ferrous and the coins should not be magnetic. We observed that the material supplier sampled/inspected 100 percent of containers received using these methods. If there are concerns about the material quality, the container is emptied onto an inspection conveyor belt table where the contents are visually inspected and run past a powerful electrical magnet to remove metal contaminants.

**Figure 6:** Mutilated Coins Which Are Not Clearly Recognizable as U.S. Coinage.



Source: Mutilated coins sample taken by OIG during the Mint's redemption process.

Also, we found in another sample, many of the coins returned had the exact same method of wear and some were peeling. For example, in a sample containing approximately 500 coins, we found coins peeling, blistering, and many appeared to have been mutilated in the same manner. These conditions raise questions regarding the genuineness of these coins.

**Figure 7:** Mutilated Coins Which Are Peeling and All Similarly Worn.



Source: Mutilated coins sample taken by OIG during Mint's redemption process.

When questioned about the authenticity of the coins found in our mutilated coin samples, one Mint official told us that Mint personnel overseeing the redemption process lacked the

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expertise and equipment to appropriately identify non-genuine U.S. coinage and that visual inspection is used to authenticate the coins.<sup>52</sup> Additionally, the Mint relies on its material suppliers to tell the Mint if the chemical composition is off when the redeemed coins are melted.

As we cited above, the Mint already incurs a loss on the Mutilated Coin Redemption Program because the Mint pays face value for the redeemed coins and receives only scrap value for the coins from its material suppliers when the coins are recycled. Further exposing the Mint to additional losses is the Mint paying out tens of millions of dollars for non-genuine U.S. coinage by not being able to or appropriately authenticating U.S. coinage.

#### Mint Has No SOP for Uncurrent Coin Redemptions

We found that the Mint did not have formalized procedures over the redemption process for uncurrent coins and relied on FRBs to authenticate the coins. According to a Mint official at the time of our audit, the Mint's SOP was developed only for mutilated coin redemptions because uncurrent coins come from FRBs, who make the determination as to whether coins are uncurrent.

During our review, we found numerous issues with uncurrent coin redemptions, including:

- Large amounts of foreign containments, such as scrap metal, which had to be removed at additional expense;
- Some coins appeared worn in a similar fashion which raised questions regarding their genuineness; and
- Significant amounts of mutilated coins in the uncurrent redemption.

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<sup>52</sup> The material suppliers also conducted their own tests on the coins prior to accepting them, which included a surface test of a sample of coin returns and a test for metallic contaminants using a metallic probe.



The figure below displays a random sample of uncurrent coins taken by OIG. The sample consisted of approximately 700 coins in which only 3 coins met the definition of uncurrent.

**Figure 8.** OIG Sample of Uncurrent Coins From FRBs Showing Mutilated Coins in Mix.



Source: Uncurrent coin redemption sample taken by OIG during Mint's redemption process.

When we asked about the uncurrent coins redeemed, a Mint official told us that the Mint lacked the ability to authenticate or make the determination as to what was an uncurrent coin. Board officials told us that authenticating coins is the Mint's responsibility. The Board authenticates only currency because it has the authority to issue currency, but not coinage. The distribution of coins through FRBs is done on behalf of the Mint as a public service.

### Melting of Coins Cannot Be Ensured

The Secretary of the Treasury is required by law to melt U.S. coins removed from circulation.<sup>53</sup> The Mint provides the means to accomplish this through its coin exchange programs. We found the Mint mainly relies on its contracts with its material

<sup>53</sup> According to 31 U.S.C. 5120, *Obsolete, mutilated, and worn coins and currency*, the Secretary of the Treasury shall melt obsolete and worn U.S. coins withdrawn from circulation. Additionally, the Secretary is responsible for accounting for withdrawn coins, metal from the coins, as well as any proceeds or losses from metal sales and coin redemptions.

suppliers to ensure mutilated and uncurrent coins are melted and does not have a reconciliation process in place.

The Mint's contracts with its material suppliers stipulate that all uncurrent and mutilated coins sent to its material suppliers shall be melted. Additionally, title to the coins pass from the Mint to the material suppliers upon delivery. According to the Mint's annual report, all mutilated and uncurrent coins sold to its material suppliers to be processed into coils or blanks to be used in future coin production have been defaced.<sup>54</sup> However, we found this statement to be inaccurate as we found neither uncurrent or mutilated coins redeemed and sent to the Mint's material supplier for recycling had been defaced. Figure 9 below displays three coins that were defaced and sold as scrap to its material supplier rather than issued into circulation by the Mint.

**Figure 9.** Defaced Coins



Source: Treasury OIG sample from material supplier raw material inventory taken on June 5, 2018.

The Mint had no formalized procedures in place to ensure uncurrent coins are melted. According to the Mint, security melts are conducted for material determined to be sensitive and uncurrent coins. A security melt is a melt that is supervised by Mint police to ensure proper control. However, during a site visit to one material supplier, we found a substantial amount of

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<sup>54</sup> Defaced coins are coins which have been put through a coin defacing machine by the Mint to render them unrecognizable and unusable. This procedure is typically performed on coins that do not meet Mint standards for issuance into circulation. Mint officials stated the Mint previously used secure melts, with Mint Police present, to dispose of coins. However, defaced coins are not considered legal tender, and therefore, do not require a secure melt, so they can be disposed of with the Mint's normal scrap and without the added security.



unsecured uncurrent coins which were to be melted with no scheduled melt date.<sup>55</sup>

Additionally, during site visits to two Mint material suppliers, we found a significant amount of mutilated coins that had been left unsecured in these material suppliers' facilities after a Mint mutilated coin redemption from about 1 to 4 months prior to our visit. At one material supplier, we found mutilated coins being stored in the shipping/staging area that had limited physical deterrents in place to prohibit access to approximately 35 bulk bags and 7 boxes of mutilated coins. Additionally, none of the bulk bags or boxes were sealed or covered. Access to the coins was possible by reaching into the bag or box. Also, one of the bulk bags was rolling off its pallet and was close to spilling coins out onto the warehouse floor.

**Figure 10.** Mutilated Coins Left Unsecured at Material Supplier



Source: Material supplier picture taken at during OIG site visit.

The Mint's Mutilated Coin Redemption Program draft SOP directs the Mint to conduct a variety of verification activities during the processing of mutilated coins from bulk redeemers. These activities include the witnessing of the mutilated coin melts, which we found is not being performed. Failure by the Mint to witness the melts exposes the Mint to the risk that

<sup>55</sup> We found 10 containers or approximately 35 thousand pounds of uncurrent pennies in the material supplier's warehouse waiting to be melted.

coins could be subsequently used as currency or redeemed again at face value.

We were told by a Mint official that the Mint will not redeem coins that are melted or totally defaced. We believe that, if the Mint defaces the coins being removed from circulation so that the coins cannot be redeemed again before being sent to material suppliers, this would meet the intent of 31 U.S.C. 5120. With that said, the Mint should consider processing coin redemptions at its facility where the Mint can totally deface the coins. This will allow the Mint the time to appropriately sample and inspect the coins in a secure location and also prevent the Mint, as we noted during our audit, from passing title to coins that are still considered legal tender to its material suppliers.

### **Recommendations**

We recommend that the U.S. Mint Director take the following actions before processing any mutilated or uncurrent redemptions and ensures the Mint:

1. Strengthens and finalizes SOPs for all coin exchange programs before accepting any redemptions. This would include using tests and subject matter experts to authenticate the genuineness of coins redeemed, as well as working with the Board to develop appropriate interagency procedures to assure the integrity of the coin redemption process for uncurrent coins.

### **Management Response**

Management concurred with the recommendation. Management stated the Mint finalized the SOPs to address the recommendations contained in our August 2018 Notification of Findings and Recommendations. The Mint acknowledges that its capability to authenticate mutilated and uncurrent coins previously relied primarily on visual inspection and metallurgic and magnetic testing. Management stated that the Mint has since organized a scientific staff and is building a more robust anti-counterfeit capability that will improve the Mint's capacity to identify suspected counterfeit coins. Additionally, the Mint is

developing procedures to support interagency partners while complying with Mint requirements and good governance.

OIG Comment

Management's response and corrective actions, planned and taken, meet the intent of our recommendation. Management will need to record the estimated dates for completing its planned corrective actions as well as the actual dates of completed corrective actions in JAMES, Treasury's audit recommendation tracking system.

2. Follows all SOPs, including but not limited to, procedures related to sampling, inspecting, and testing of coins; and appropriately documenting redemptions. Additionally, ensure that adequate background investigations are conducted on bulk redeemers and decisions to allow participation into the Mutilated Coin Redemption Program are based on relevant data from the background investigation. The Mint should add criteria such as obtaining financial statements for analyses of potential bulk redeemers and performing site visits at their premises as part of the background investigation process for entry into the program. The Mint should document how this criteria was met, and if these steps were not performed, the reasons why.

Management Response

Management concurred with the recommendation. Management stated the Mint will sample, inspect, and test coins and will study the bulk redeemer recommendations. The recommendation for sampling, inspecting, testing, and documenting redemptions is addressed in the Mint's revised SOP. Management also stated the Mint will assess the resource requirements to conduct robust analysis of potential bulk redeemers and document its decision.

OIG Comment

Management's response and corrective actions, planned and taken, meet the intent of our recommendation. Management will need to record the estimated dates for completing its planned corrective actions as well as the actual date of its

completed corrective action in JAMES, Treasury's audit recommendation tracking system.

3. Ensures that all coins returned to the Mint and removed from circulation are destroyed timely and sufficiently accounted for.

#### Management Response

Management concurred with our recommendation. Management stated that procedures to ensure that all coins returned to the Mint and removed from circulation are destroyed timely and are sufficiently accounted for is addressed in the Mint's revised SOP.

#### OIG Comment

Management's response and corrective action taken meet the intent of our recommendation. Management will need to record the actual date of the corrective action taken in JAMES, Treasury's audit recommendation tracking system.

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We appreciate the cooperation and courtesies extended to our staff during the audit. If you wish to discuss the report, you may contact me at (617) 223-8638 or Ken O'Loughlin, Audit Manager, at (617) 223-8624. Major contributors to this report are listed in appendix 3. A distribution list for this report is provided as appendix 4.

/s/

Sharon Torosian  
Audit Director, Manufacturing and Revenue

## Appendix 1: Objectives, Scope, and Methodology

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The objective of our audit was to determine the adequacy of the United States Mint's (Mint) controls over the quality assurance of raw materials, including controls over the composition of coins returned through the Mint's coin exchange programs and used in the production of circulating coinage.<sup>56</sup> This included the review of the quality assurance procedures for raw materials prior to the minting of circulating coinage. We did not evaluate the Mint's quality assurance controls related to its production of circulating coinage.

To accomplish our objective, we performed the following activities during audit fieldwork from January 2018 through April 2019 with subsequent updates in May 2020:

- Conducted interviews with Mint officials to gain a high-level understanding of the processes for receiving, inspection, and quality assurance of raw materials.
  - From the Mint Headquarters, this included the: Chief of Internal Control; Chief of Quality; Senior Supplier Quality Engineer; Supplier Management Specialist and Contracting Officer's Representative for Mint's raw material contracts; Metals Manager; and Business Analyst.
  - From the Mint Philadelphia facility, this included the: Philadelphia Mint Quality Manager and other quality assurance personnel; Metallurgist; Chemist; Production Manager; Process and Industrial (quality) Engineers and various receiving, production, and shipping personnel.
  - From the Mint Denver facility, this included the: Denver Quality Manager; Industrial Engineer of the Quality Assurance Division and other quality assurance personnel; Quality Lab personnel; Systems Accountant from the Mint Reporting and Internal Controls Branch;

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<sup>56</sup> "Coin exchange programs" refer to both the Mint's Mutilated Coin Redemption Program and the uncurrent coin redemption process followed by banks in returning uncurrent coins to the Mint.

## Appendix 1: Objectives, Scope, and Methodology

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and various receiving, production, and shipping personnel.

- Conducted walkthroughs of the Mint's Philadelphia and Denver production facilities, including the following areas:
  - Receiving/shipping areas, including Denver Mint's off-site warehouse,<sup>57</sup>
  - Production, and
  - Quality Assurance Labs.
- Conducted interviews with the Mint's circulating coin raw material suppliers to gain an understating of their production processes and quality management systems.
  - GBC Metals, LLC, subsidiary Olin Brass DC Casting (Olin Brass) officials and personnel, including: the Vice President of Marketing and International; Director of Metals Management and Purchasing; Director of Quality and Process Engineering; and various engineers and production personnel, including personnel in the quality labs.
  - PMX Industries, Inc. (PMX) officials and personnel, including the: Vice President of Manufacturing; Vice President of Sales and Marketing; Director of Marketing/Research and Development; Director of Quality Assurance; Manager Inside Sales; Laboratory Manager; and various engineers and production personnel, including personnel in the quality labs.
  - Jarden Zinc Products, LLC (Jarden) officials and personnel, including the: Senior Vice President of Operations; Quality Manager; Manager U.S. Mint Fabrication Plant; Customer Service Manager; and various production personnel, including personnel in the quality labs.

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<sup>57</sup> The Denver Mint has a contract with Aspen Distribution, Inc. in Aurora, Colorado, to receive and store raw materials from the Mint's material suppliers until they are needed for production.

## Appendix 1: Objectives, Scope, and Methodology

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- Conducted site visits at the Mint’s circulating coin raw material suppliers to observe their production processes and quality management systems, including the following areas:
  - Receiving/shipping areas,
  - Production, and
  - Quality Assurance Labs.
- Interviewed the Board of Governors of the Federal Reserve System (Board) to obtain their perspective on the quality of circulating coinage.
- Reviewed applicable Department of the Treasury (Treasury) orders and directives, past Office of Inspector General (OIG) reports, applicable laws and regulations, and government-wide guidance applicable to the quality assurance of raw materials.
- Reviewed applicable documentation from the Mint and its material suppliers, pertaining to the quality assurance of circulating raw materials, for fiscal years 2015 through 2017, including:
  - Contracts with the Mint’s material suppliers;
  - Historical program data, including the amount of materials received;
  - Policies and procedures; and
  - Quality reports and quality assurance information from (1) supplier quality management system documents and reports, (2) results from the Mint’s Supplier Scorecard Program and resulting Non-Conformance reports, and (3) sampling data from the results of Mint’s testing and sampling of coupons and penny blanks.<sup>58</sup>

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<sup>58</sup> Our assessment of the amount and extent of quality issues was based on the Mint’s documented review and may or may not be representative of all quality issues or risks present at the time.

## **Appendix 1: Objectives, Scope, and Methodology**

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To assess controls over the composition of coins returned through the Mint's coin exchange programs used in the production of circulating coinage, we performed the following:

- Conducted interviews with Mint officials responsible for the Mint's coin exchange programs to gain an understanding of the programs and controls.
  - From the Mint's Headquarters, this included the: Chief of Accounting/Mutilated Coin Manager; Chief of Internal Control; Supplier Management Specialist and Contracting Officer's Representative for Mint's raw material contracts; Metals Manager; and Business Analyst.
  - From the Mint's Philadelphia facility, this included the Traffic Manager and personnel responsible for inspecting and processing mutilated and uncurrent coins.
- Conducted interviews with the Mint's circulating coin raw material suppliers to gain an understanding of their involvement with the mutilated coin program.
  - Olin Brass officials and personnel, including the: Vice President of Marketing & International; Director of Metals Management and Purchasing; Director of Quality and Process Engineering; and various engineers and production personnel, including personnel in the quality labs.
  - PMX officials and personnel, including the: Vice President of Manufacturing; Vice President of Sales and Marketing; Director of Marketing/Research and Development; Director of Quality Assurance; Manager Inside Sales; Laboratory Manager; and various engineers and production personnel, including personnel in the quality labs.



## **Appendix 1: Objectives, Scope, and Methodology**

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- Jarden officials and personnel, including the: Senior Vice President of Operations; Quality Manager; Manager U.S. Mint Fabrication Plant; Customer Service Manager; and various production personnel, including personnel in the quality labs.
- Observed the redemption and recycling of coins redeemed through the Mint's coin exchange programs at Olin Brass from July 31, 2018 through August 2, 2018, which included obtaining coin samples from the redemptions.
- Conducted interviews with the Mint's contractor PricewaterhouseCoopers LLP (PWC) (now Guidehouse) which assisted in the restructuring of the Mint's Mutilated Coin Redemption Program, including a: PWC Partner; Guidehouse Partner; and Manager/Subject Matter Expert with Guidehouse.
- Conducted an interview with officials from Board Banknote Issuance and Cash Operations and the Federal Reserve Bank (FRB) Cash Product Office to obtain perspective on uncurrent coin redemptions and the Mutilated Coin Redemption Program, including, the Board's Banknote Issuance and Cash Operations Assistant Director and Manager, and FRB's Cash Product Office Manager and Senior Project Analyst. Also, obtained the officials' perspectives on the quality of circulating coinage.
- Reviewed applicable Treasury orders and directives, past OIG reports, applicable laws and regulations, and government-wide guidance applicable to the Mint's Mutilated Coin Redemption Program.
- Reviewed applicable documentation pertaining to the coin exchange programs, including:
  - Contracts with the Mint's material suppliers;

## **Appendix 1: Objectives, Scope, and Methodology**

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- Historical program data, including the amount of uncurrent and mutilated coins received for the last 10 years;
- Policies and procedures, including the draft Mutilated Coin Program Standard Operating Procedure; and
- Program reviews conducted by PWC.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Appendix 2: Management Response

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DEPARTMENT OF THE TREASURY  
UNITED STATES MINT  
WASHINGTON, D.C. 20220

July 30, 2020

**MEMORANDUM FOR OFFICE OF INSPECTOR GENERAL  
DEPARTMENT OF THE TREASURY**

**FROM:** David J. Ryder   
Director, United States Mint

**SUBJECT:** Comments on Draft Audit Report on Mint Controls over Raw Materials and Coin Exchange Programs

**BACKGROUND**

On November 30, 2017, the Office of Inspector General (OIG) sent the United States Mint (Mint) an Engagement Memorandum initiating an audit of the Mint's procurement and quality assurance of raw materials used to produce circulating coinage. The objective of the audit was to determine the adequacy of the Mint's controls over the procurement and quality assurance of raw materials, including controls over the composition of coins returned through the Mint's coin exchange program and used in the production of circulating coinage. This audit was included in the *Fiscal Year 2018 Office of Inspector General Annual Audit Plan*.

On June 16, 2020, the OIG provided the Mint the draft audit results on Mint Controls over Raw Materials and Coin Exchange Programs (Draft Report). The Draft Report contains two findings:

1. The Mint relies mainly on its materials suppliers for raw materials quality assurance of circulating coins.
2. Controls over the Mint's coin exchange programs are deficient.

**ANALYSIS**

The United States Mint has thoroughly reviewed the attached report and concurs with all the findings and recommendations. We are currently taking the necessary actions to address the recommendations outlined in the OIG's Report.

**MANAGEMENT RESPONSE TO FINDINGS AND RECOMMENDATIONS**

Finding 1 – The Mint relies mainly on its material suppliers for raw materials quality assurance of circulating coins.

## Appendix 2: Management Response

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Recommendation 1. Conducts regular reviews of the suppliers' quality systems to ensure that they are acting in the best interest of the Mint. This includes regular site visits and periodic reviews of the suppliers' quality system documentation.

Management Response: The Mint concurs with this recommendation. The Mint has conducted, and continues to conduct, regular reviews of the suppliers' quality systems that include regular site visits. From FY 2013 to FY 2015, the Mint conducted five quality site visits and reviews at the suppliers. This was followed by a two-year gap in visits; however, non-conforming material notifications and corrections continued. The Mint increased supplier reviews and visits in FY 2018 with four visits and five visits in FY 2019. The focus of these visits has been on supplier correction actions and Quality Management System records. Supplier reviews are planned for FY 2020. As to the Mint's reliance mainly on the supplier's Quality Management System and International Standards Organization certification to ensure the quality of the raw materials, every world-class manufacturing organization relies on these as well, enabling a seamless material handoff while decreasing transaction cost, defects and increasing efficiency. The supplier's certifications come with the benefit of third-party auditing much like an audit of a company's financial statements for investor confidence. As noted in this Audit Report, the Audit was unable to review the eleven significant in-process inspections that enable adequate and systemic control of raw materials that yield highly reliable coinage for the public.

Recommendation 2. Develops and implements SOPs that are consistent among Mint facilities to ensure quality assurance processes over sampling, inspection, and testing of materials for circulating coinage are standardized and documented; and that materials received meet the specifications required in the contracts and by U.S. law.

Management Response: The Mint concurs with this recommendation. The Mint documented and standardized the types of testing conducted on materials for circulating coinage across the Philadelphia and Denver Mints. All coil coupons are now tested and Philadelphia restarted penny blank sampling in FY 2018. This Audit Report details minimal quality issues from the suppliers. In fact, no material composition issues have been identified as the suppliers performed above six sigma quality in alloy formulation and casting. For dime delaminations, the suppliers performed near six sigma quality with a 24.8 parts per million defect rate. For quarter delaminations, the suppliers performed at a 676.2 parts per million defect rate. Dime and quarter delaminations in FY 2018 and 2019 continued to decline to 6.5 and 177.1 parts per million, respectively. The Mint's quality assurance strategy seeks to reduce supplier delaminations during the supplier's production while improving quality control with more robust sampling. As to the Mint not testing all raw material, sampling is a function of risk management and problem detection; it is not mathematically reasonable to test everything.

Recommendation 3. Considers sampling and testing the material after blanking in order to assess the material quality throughout the coil.

Management Response: The Mint concurs with this recommendation and will implement coin blank bend testing in FY 2020. The Mint currently monitors the blanking of the coil by checking the thickness and diameter.

## Appendix 2: Management Response

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Recommendation 4. Verifies incoming raw material weights to ensure that the Mint is receiving the raw materials paid for.

Management Response: The Mint concurs with this recommendation and will implement procedures to verify incoming raw material weights through statistically appropriate monitoring processes. Additionally, the Mint will continue to monitor finished coin, bulk bag weights, and count data to evaluate weight variances in the inventory to protect the Mint's working capital.

Recommendation 5. Considers improving raw materials traceability by using a unique number to identify each coil rather than a group lot number.

Management Response: The Mint concurs with this recommendation up to the blanking press when coil identity is lost by design. The Mint currently does accurately trace coils to the blanking press by their original coil and lot identifications as given by the suppliers. The Mint uses these identifications to contain and control non-conforming material as needed. We will consider whether assigning a unique number would be a cost-effective improvement to the Mint's current practice.

Finding 2 – Controls over the Mint's coin exchange programs are deficient.

Recommendation 1. Strengthens and finalizes SOPs for all coin exchange programs before accepting any redemptions. This would include using tests and subject matter experts to authenticate the genuineness of coins redeemed, as well as working with the Board to develop appropriate interagency procedures to assure the integrity of the coin redemption process for uncurrent coins.

Management Response: The Mint concurs with this recommendation. The Mint finalized the SOPs to address the recommendations contained in OIG's August 2018 Notification of Findings and Recommendations. The Mint acknowledges that its capability to authenticate mutilated and uncurrent coins previously relied primarily on visual inspection, and metallurgic and magnetic testing. The Mint has since organized a scientific staff and is building a more robust anti-counterfeit capability that will improve the Mint's capacity to identify suspected counterfeit coin. The Mint is developing procedures to support interagency partners while complying with Mint requirements and good governance.

Recommendation 2. Follows all SOPs, including but not limited to, procedures related to sampling, inspecting, and testing of coins; and appropriately documenting redemptions. Additionally, ensure that adequate background investigations are conducted on bulk redeemers and decisions to allow participation into the Mutilated Coin Redemption Program are based on relevant data from the background investigation. The Mint should add criteria such as obtaining financial statements for analyses of potential bulk redeemers and performing site visits at their premises as part of the background investigation process for entry into the program. The Mint should document how this criteria was met, and if these steps were not performed, the reasons why.

Management Response: The Mint concurs with the recommendation to sample, inspect, and test coins and will study the bulk redeemer recommendations. The recommendation for sampling,

## Appendix 2: Management Response

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inspecting, testing, and documenting redemptions is addressed in the revised SOP. The Mint will assess the resource requirements to conduct robust analysis of potential bulk redeemers and document its decision.

Recommendation 3. Ensures that all coins returned to the Mint and removed from circulation are destroyed timely and sufficiently accounted for.

Management Response: The Mint concurs with this recommendation. This recommendation is addressed in the revised SOP.

### SUMMARY

The Mint greatly appreciates OIG's thorough audit of, and recommendations for, the Mint's controls over the procurement and quality assurance of raw materials used in the production of U.S. circulating coinage. Your recommendations will assist the Mint in improving our operations and achieving our mission of connecting America through coins.

## **Appendix 3: Major Contributors to This Report**

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Ken O'Loughlin, Audit Manager  
Richard Wood, Auditor-In-Charge  
Olivia Scott, Referencer

## **Appendix 4: Report Distribution**

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### **Department of the Treasury**

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Group

### **United States Mint**

Director  
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### **Office of Management and Budget**

OIG Budget Examiner

### **United States Senate**

Chairman and Ranking Member  
Committee on Banking, Housing, and Urban Affairs

### **United States House of Representatives**

Chairman and Ranking Member  
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Subcommittee on National Security, International  
Development and Monetary Policy  
Committee on Financial Services



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